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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,754	02/25/2000	Toshio Nakakuki	005586-20033	7497

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EXAMINER

YE, LIN

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 08/29/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application**

09/512,754

Applicant(s)

NAKAKUKI ET AL.

Examiner

Lin Ye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al. U.S. Patent 5,751,354.

Referring to claim 1, the Suzuki reference discloses in Figures 1-8, a solid-state imaging apparatus, comprising: a solid-state image sensor (CCD 4) having a plurality of light receiving elements arrayed thereon, for accumulating in each of the plurality of light receiving elements information charges according to a received object image; a driving circuit (6) for discharging the information charges accumulated in each of the plurality of light receiving elements of the solid-state image sensor, and for outputting, after a predetermined period, information charges accumulated in each of the plurality of light receiving elements whereby an image signal according to the information charges is obtained (See Col. 10, lines 3-16); first exposure information generating circuit (the operation as to server as a second stoke switch SW2. See Figures 4 through 7, illustrating a subroutine for

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fine adjustment of exposure, See Col. 12, lines 16-25) for detecting a level of the image signal in a predetermined (preceded) cycle (for detect average of level brightness of the image signal) to generate first exposure information (i.e. a gain value, an integration time, and an aperture size) which is increased or decreased (adjusted) based on a detection result (See Col. 12, lines 51-59); second exposure information generating circuit (the operation as to serve as a first stroke switch SW1. See Figure 3, illustrating a subroutine for coarse exposure adjustment to set of the amount of exposure of the image sensing device to a level) for calculating (CPU 10 implementing coarse adjustment of exposure) second exposure information based on the level (comparing with black level) of the image signal (See Col. 11, lines 10-23); selecting circuit (Switch SW1 and SW2) for selecting either the first exposure information or the second exposure information (See Col. 10, lines 20-23); and timing control circuit (timing signal generator 5) for setting discharge timing and output timing to the driving circuit; wherein the selecting circuit selects the second exposure information during a predetermined period, and subsequently selects the first exposure information (See Figure 2, Step S1 through S11).

Referring to claim 2, the Suzuki reference discloses wherein the selection circuit continuously selects the second exposure information during a predetermined period (operation of the switch SW1) in response to rise of power (considered the power supply is turned on as the camera to start photography).

Referring to claim 3, the Suzuki reference discloses wherein the selecting circuit continuously selects the second exposure information during a predetermined period in

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response to a trigger (control console 12) given at a desired timing (the first switch SW1 is not exceeded a prescribed time set by a trigger. See Col. 18, lines 40-44).

Referring to claim 7, the Suzuki reference discloses wherein the second exposure information generating circuit continuously generates the second exposure information (coarse exposure adjustment) for every vertical scanning period (every period of the photographic operation) during at least the predetermined period (the period of pressing the switch SW1) (See Col. 11, lines 36-47).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. U.S. Patent 5,751,354 in view of Mochizuki et al. U.S. Patent 5,793,422.

Referring to claim 4, the Suzuki reference discloses all subject matter as discussed in respected claims 1, and also second exposure information generating circuit for calculating second exposure information (i.e. gain value and shutter speed) according to a predetermined target brightness level (reference level of black pixel) based on a current brightness level (the brightness of outside light is detected) and current exposure information (the exposure is performed at minimum lens aperture and at an electronic shutter speed is as high as setting

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allow, See Col. 11, lines 50-65 and Col. 12, lines 1-12). However, the reference does not explicitly states the first exposure information generating circuit for comparing the brightness level and a predetermined brightness reference value to generated first exposure information (exposure correction signal Lx) which is increase or decreased based on a comparison result.

The Mochizuki reference discloses in figure 4, an imaging apparatus has compare circuits (21 and 22) which adapted to compare an the brightness level (output voltage of video signal) and a predetermined brightness reference value (the reference voltages V1, V2) to generated exposure information (shutter speed) which is increased or decrease based on a comparison result (See Col. 7, lines 1-15). The MOchizuki reference is an evidence that one of ordinary skill in the art at the time to see more advantages for using a predetermined brightness reference value according to suitable exposure condition to compare with the brightness level output from the image sensor during each vertical scanning period, therefore significantly increase the accuracy for the fine exposure adjustment to reach a optimum exposure time. For that reason, it would have been obvious to see the first exposure information generating circuit (fine exposure adjustment circuit) for comparing the brightness level and a predetermined brightness reference value to generated first exposure information (exposure correction signal Lx) which is increase or decreased based on a comparison result disclosed by Suzuki.

Referring to claim 5, the Suzuki reference discloses all subject matter as discussed with respected to same comment as with claim 2.

Referring to claim 6, the Suzuki reference discloses all subject matter as discussed with respected to same comment as with claim 3.

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Referring to claim 8, the Suzuki reference discloses wherein the first exposure information generating circuit updates the first exposure information (fine exposure adjustment) every vertical scanning period (every period of the photographic operation) (See Col. 16, lines 64-67 and Col.17, lines 1-7).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Bell et al. U.S 6,486,915 discloses an automated search method for selecting the exposure settings to be the current setting in response to the captured scene which neither underexposed or overexposed.
 - b. Takahashi et al. U.S 6,480, 226 discloses an image pickup apparatus including two exposure control circuits.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Lin Ye** whose telephone number is **(703) 305-3250**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (703) 305-4929.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to:

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(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive,

Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Lin Ye
August 13, 2003


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600